Minnesota Sea Grant Program
2012 NSGO Review

Terry Smith

Minnesota SG Management

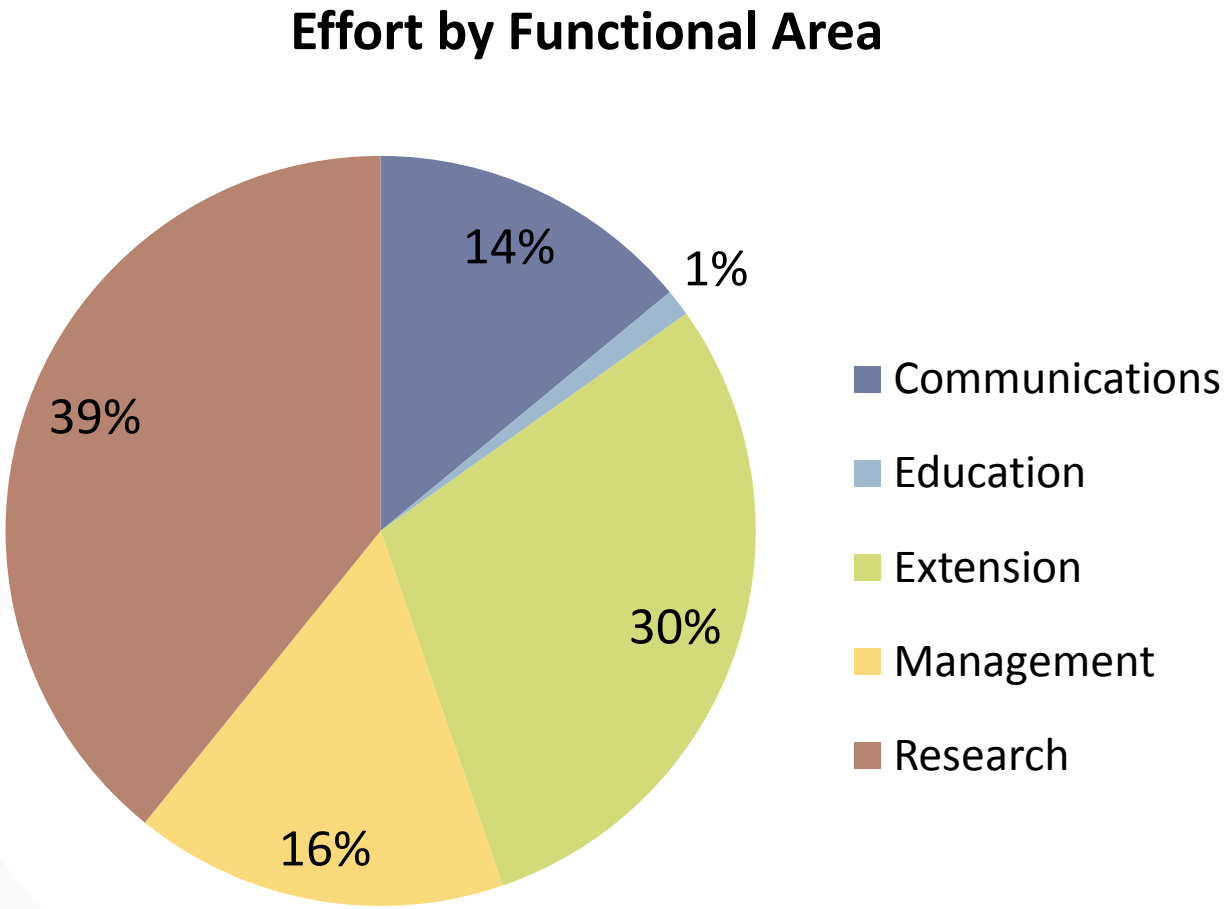
- Management staff
  - Jeff Gunderson, Director
  - Valerie Brady, Research Coordinator
  - Jesse Schomberg, Program Leader
  - Sharon Moen, Communications Coordinator
  - Connie Post, Financial Officer
- Size of Program
  - Small

Minnesota SG Management

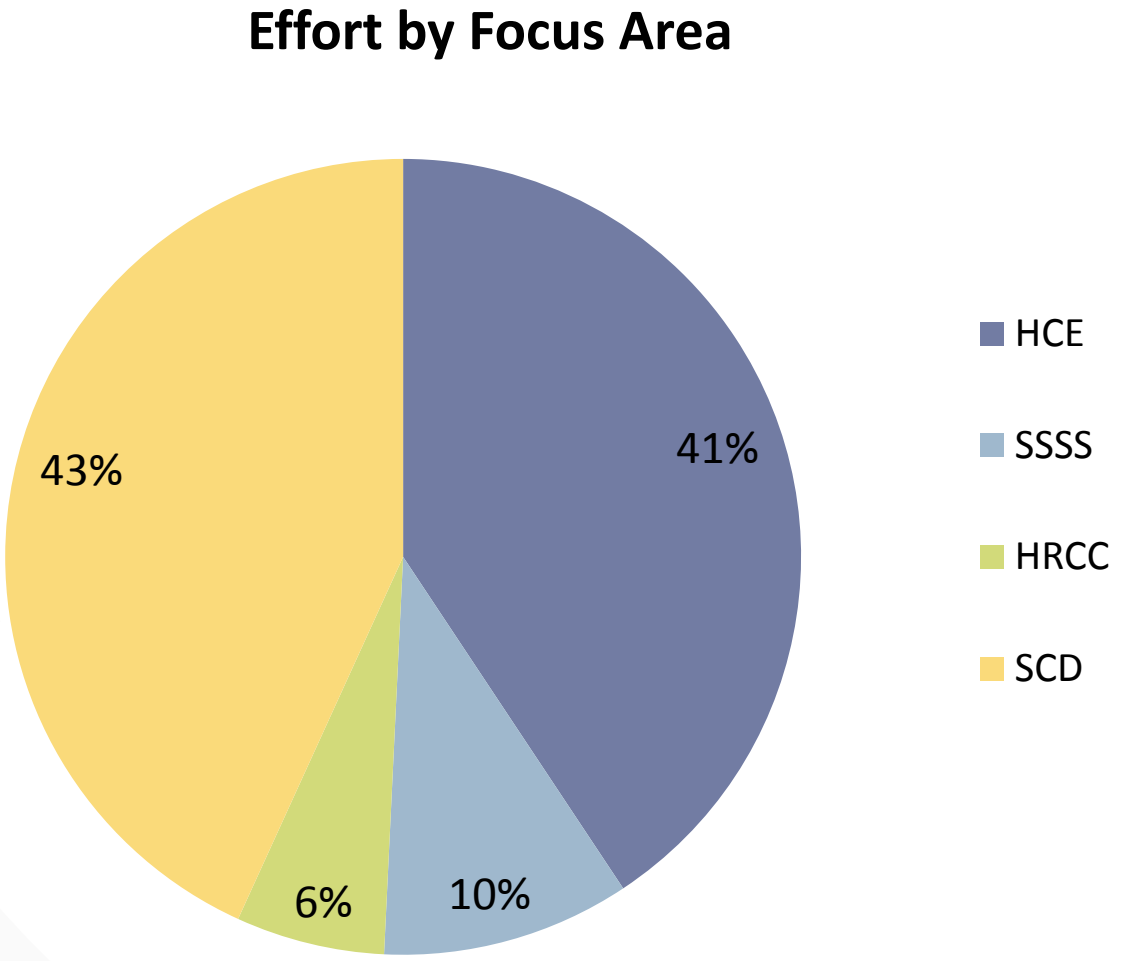
- Total FTEs on staff

Functional Area	# of individuals	# of FTEs supported by Sea Grant	# of FTEs supported by match/leverage
Management /Administration	5	1.12	3.2
Communication	4	2.76	0.42
Extension	6	1.77	3.63
Education	1	0.20	0
Research	26	3.32	1.33

Minnesota SG 2010 Core Budget (Fed+Match) towards each Functional Area



Minnesota SG Budget towards each Focus Area (Fed + Match + Pass-Through + Managed Leveraged Funds)



Significant Minnesota SG Changes (since January 2011)

- In January 2012 program hired a one-year, half-time Climate Extension Educator on a jointly funded project with Wisconsin Sea Grant

Minnesota SG RFP Process

- Advisory Committee and MNSG staff list research needs and questions which become specific topics of interest within each focus area
- Request socio-economic proposals and ask that proposals address economic issues
- Pre-proposals are reviewed by staff, but anyone can submit full proposals (joint with Wisconsin SG)
- Full proposal review
  - Three technical experts review each proposal
  - Technical review panel then rates and ranks proposals
  - Advisory committee and staff comment on, rate, and rank proposals that pass technical panel
  - Top-ranked proposals are funded
    - Funding and balance between schools and experienced/new researchers is relevant to final ranking

Minnesota SG RFP Process for 2012-2014 Projects – Research Metrics

Core Proposals	# of proposals	# of institutions	# from home institution
Pre-proposals submitted	19	8	19
Full proposals submitted	11	7	11
Proposals funded	5	7	5

Minnesota SG Contribution to National Performance Measures and Metrics

Focus Area	Metric	Actual
	Volunteer Hours	1053
	K-12 Students Reached	6931
	Professional Meetings	156
	Attendees at Professional Meetings	13938
	Presentations at Professional Meetings	69
HCE SCD	Resource Managers using EBM	114

Minnesota SG Impact

Focus: Sustainable Coastal Development

U.S. Ballast Water Policies and Management Improved

GOAL: facilitate and report for The Great Lakes Ballast Water Collaborative (state and fed agencies, marine industry reps, scientists, etc., to find solutions to aquatic invasive species challenges

Results:

- Science incorporated into state ballast water legislation (MN, WI, CA)
- U.S. and Canadian agencies, and International Maritime Organization reference reports
- Scientists pursuing solutions for freshwater ballast management issues
- Preventing environmental lawsuits
- Industry looking to exceed proposed ballast water discharge standards
- International Joint Commission commends Sea Grant's role in creating the GLBWC and documenting progress

Chris J. Benson

Minnesota SG Impact

Focus: Healthy Coastal Ecosystems

Sea Grant Critical to Advancing Aquatic Science

Goal: Fund Lake Superior research and facilitate the sharing of research results. Provided logistical support for a scientific exchange: The Ecology of Lake Superior Conference.

Results:

- 20 the 60 presenters (30%) credited their results fully or in part to Sea Grant funding
- One of the most respected Great Lakes food web scientists, Jim Kitchell, publically credited Sea Grant for supporting critical Lake Superior research
- The Conference is being documented in two special issues of The Aquatic Ecosystem Health and Management Journal

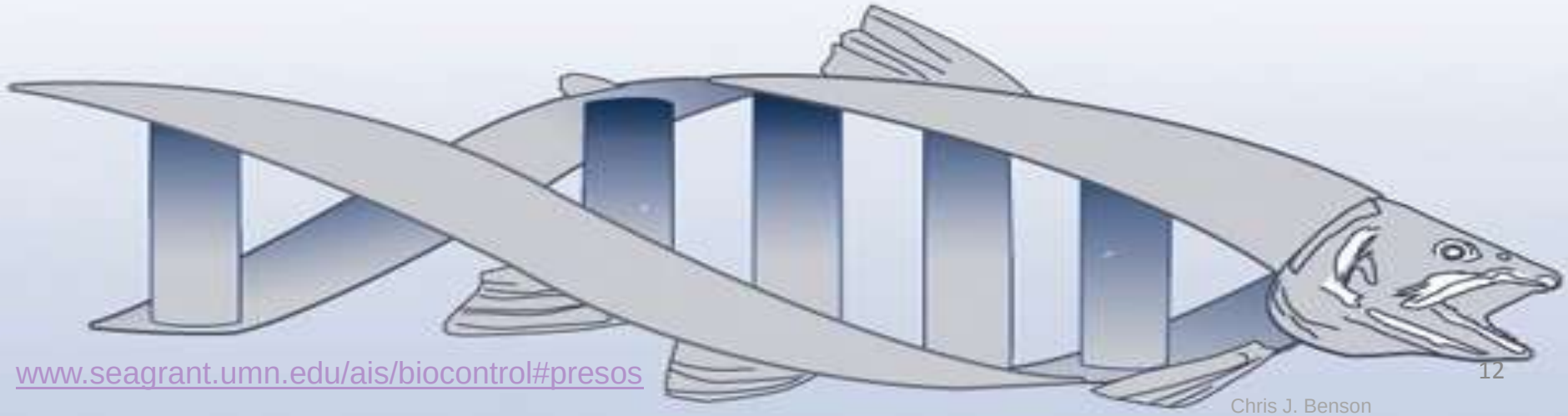
Chris J. Benson

Potential for the Genetic Biocontrol of Invasive Fish Examined

Goal: Organize the first-ever International Symposium on Genetic Biocontrol of Invasive Fish to address the use of genetically engineered organisms against invasive fish (like Asian carp)

Results:

- 80 participants, including internationally renowned scientists and bioengineers, defined the current status of biocontrol technology and issues surrounding its use
- 8 focus groups across GL region assess perceptions about releasing genetically modified organisms to control invasive species. … *"Just a gut reaction, but it seems like the work of a mad scientist sitting in a lab cooking up something evil with weird parts"*
- *Biological Invasions* to publish synthesis papers about genetic biocontrol technologies, environmental risk assessment, and managing genetic biocontrol applications
- Decision support for future uses of genetic biocontrol at international level



www.seagrant.umn.edu/ais/biocontrol#presos

Chris J. Benson

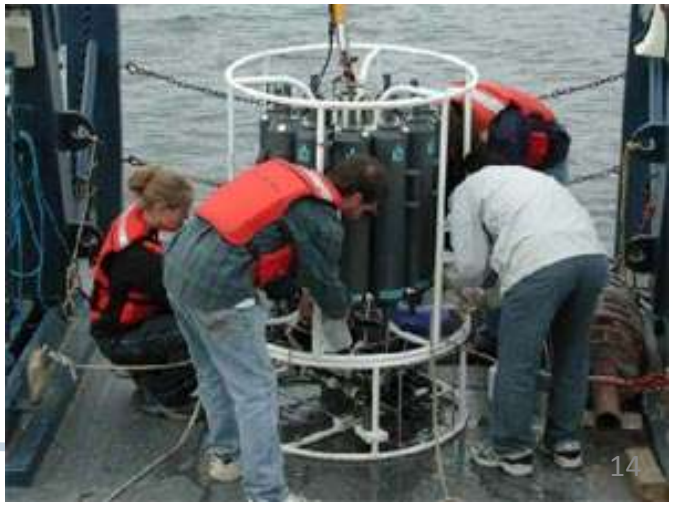
Minnesota SG 2010 Research Accomplishment

Dr. Loren Miller (UM-TC) and collaborators developed genetic markers and have research results to help fisheries managers determine the source populations and numbers of stocked fish needed to meet minimum genetic diversity goals for reintroduced fish populations

- These were the first microsatellite DNA markers for the small native stream and lake fish, the slimy sculpin (*Cottus cognatus*)
  - These PCR primers are in an international genetic database for all researchers to use

Minnesota SG 2010 Research Accomplishments

- Dr. Robert Hecky and colleagues found the first direct evidence that the warming of Lake Superior is increasing its productivity
- Between the 1970's and 1990's, Lake Superior had decreasing productivity following the start-up of better wastewater treatment
- Since 1990, that trend has reversed and there is an increase in Lake Superior's productivity concomitant with a strong warming trend in the lake over the same time period



Sources (unless otherwise noted)

- Planning, Implementation, and Evaluation Resources (PIER) https://pier.seagrant.noaa.gov
- Personal Communication with Program